

Notice of Allowability

Application No.

10/633,177

Examiner

George R. Koch III

Applicant(s)

GORDON, KEVIN

Art Unit

1734

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 10/11/06.
2. ☒ The allowed claim(s) is/are 1-10 and 12-15.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☒ None of the:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Steven Deutsch on 12/20/2006.

The application has been amended as follows:

Claims 16-30, drawn to a non-elected species (by original presentation - see Final Rejection filed 3/21/2005), are cancelled.

2. The drawings filed 8/1/2003 have been approved by the Examiner

3. The following is an examiner's statement of reasons for allowance: With respect to claim 1 and dependent claims 2-10 and 12-15, applicant's remarks filed 10/11/2006 are persuasive.

Applicant's amendment and statement on the record make clear that the step of "at least one welding process parameter affecting welding is altered..." is a mandatory required step.

The prior art does disclose many of the limitations of claim 1. US Patent 4,631,685 to Peter discloses a method for ultrasonic welding of parts by means of an ultrasonic welding device comprising at least a generator (supply 62 and interface 66), a converter (head 46), and a sonotrode (horn 48), based on a set curve of a time

dependent welding parameter appropriate to a welding connection meeting set requirements (for example, as shown in Figure 5), and where the welding duration corresponding to the set curve runs between a starting time t_0 to an end time t_e (in Peter, this is referred to as time t_4).

Peter also discloses comparing actual data with the set curve (see columns 3 and 4), but does not disclose comparing an actual curve, and does not disclose, depending on the existing difference between the set curve and the actual curve, of at least one welding process parameter affecting welding being *altered* to a value based on that existing difference such that an equalization of the set curve and the actual curve occurs during further welding.

Moll (DE 34 29 776) was also applied. Moll teaches many of the elements as Peter does, as well as teaching some additional variables controlled (see section 10, paragraph of the rejection filed 4/12/2006, on page 8) However, applicant accurately points out that Moll also does not use the difference between a time-dependent actual curve and a set curve as a basis for *altering* a welding process parameter to reduce the difference.

As properly noted by applicant, both Peter and Moll discard or separate out the products of processes that compare unfavorably (Applicant's remarks, page 10).

Picchio (IDS, 5/27/2005 and associated comments) was previously applied as disclosing steps of amending the welding time and energy, which would often result in an equalization of the set to actual curve. However, applicant's submitted translation of the magazine article shows that Picchio, and therefore the prior art of record in general,

merely discloses rejecting or removing products when a difference occurs and does not disclose amending or fixing the welding process parameters which consists of: amplitude of the sonotrode, a frequency of the sonotrode, a pressure acting on the parts to be welded, a force acting on the parts to be welded, and an energy input into the parts to be welded.

Van Brakel was also applied. However, as properly noted by applicant, Van Brakel does not vary a welding process variable as a function of time (see page 11 of the remarks filed 10/11/2006). Rather, Van Brakel is a straightforward set value comparison and equalization system which corrects the operational parameter by equalizing it to the set parameter. There is no discussion of time dependent variables or equalization of variables within a set timeframe.

Thus, the prior art of record does not alter the claimed welding process parameters as required in claim 1.¹

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

¹ Applicant's second argument, drawn to impermissible hindsight and lack of motivation, is moot due to the basis of allowability indicated above. However, such an argument would have been persuasive. Applicant argues that Van Brakel is not directed towards welding processes. This is unpersuasive, since the last sentence of the abstract states that "The invention is particularly useful in ultrasonic cleaning devices or ultrasonic welders". Additionally, claims 4 and 11 are specifically directed to ultrasonic welding.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230. The examiner can normally be reached on M-F 9-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



George R. Koch III
Primary Examiner
Art Unit 1734

GRK
12/21/2006